Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Spectrum Policy Task Force Inquiry	)	ET Docket No. 02-135
	)	

COMMENTS

CWLab.NET ("CWLab"), by its counsel and pursuant to the Commission's *Public Notice* released June 6, 2002,[1] hereby submits its comments in response to the questions raised by the Commission's Spectrum Policy Task Force in the above-captioned proceeding.

CWLab is a Chicago-based wireless Internet service provider ("WISP") that operates last-mile wireless broadband service via both license-exempt spectrum in the 902-928 MHz, 2.4 GHz and 5 GHz bands and licensed spectrum obtained under FCC Auction #30 and FCC Part 101 Rules. CWLab voices its regulatory concerns via the Wireless Communications Association's License Exempt Alliance (WCAI/LEA), who is active in a number of Commission proceedings that directly or indirectly affect the license-exempt industry. CWLab supports the LEA filing on this matter and submits on its own on the topic of the regulation of license-exempt spectrum.

CWLab utilizes license-exempt spectrum to provide last-mile wireless broadband services to commercial and residential located in downtown Chicago. CWLab treats all spectrum, licensed or not, as an asset, and tries to utilize this spectrum as efficiently as possible.

[1] "Spectrum Policy Task Force Seeks Public Comment on Issues Related to Commission's Spectrum Policies," DA-02-1311 (rel. June 6, 2002).

In terms of regulation, CWLab believes that the only sensible rules for license-exempt spectrum are rules that promote the research, development, innovation, production, and marketing of efficient systems. CWLab believes that the Commissions' job is to promote efficient use of the spectrum and ensure that the public gets good services and value.

CWLab believes that the biggest problem with current license-exempt regulation is the number of different systems that share the ISM band under the same set of rules. CWLab supports a new range of license-exempt bands (well below 2 GHz), a WISP band, created solely for outdoor wireless broadband networks delivering last-mile access services. CWLab believes that Wireless Local Area Networks ("wLANs"), or networks to bridge buildings that are part of the same LAN, should not be allowed to operate within the WISP band. CWLab believes that the prohibition of wLAN services within a WISP band will be a major improvement in the promotion of quality license-exempt systems since the ability to create jerry-rigged and spectrally inefficient 'Pringles-can' wLAN systems will be halted.

CWLab believes that such a WISP band, in addition to the rule above, does not need more than three major radio-based technical rules.

1. There should be a direct correlation between acceptable system power level ("EIRP") and antenna beam width. Antenna with large beam widths, such as omni-directional multipoint antennae, should have the strictest power requirements. Sector antenna systems utilizing good front-to-back ratios, conducive to frequency reuse, should have the ability to radiate at higher power levels. In general, the tighter the beam width, the higher the allowed power level.

2. All radio links within this WISP band would be required to use the minimum necessary power to maintain the link at 99.99% reliability, as put forth by radio propagation / multipath prediction models such as ITU-R 530-9[2]. This rule would establish a minimum level of Quality of Service ("QoS") necessary to make license-exempt wireless broadband a viable alternative to existing last-mile access technologies, and would encourage the development of spectrally efficient intelligent radios and smart antennas.

3. Perhaps as a part of the power ratio equation proposed earlier, a minimum level of spectral efficiency and sensitivity should be required for any technology operating in the band.

Lastly, CWLab believes that two major labor rules associated with this band relating primarily to the Wireless Point of Presence ("WiPOP") construction need to be instituted to ensure the deployment of quality, spectrally efficient WISP systems.

1. No one can install a WiPOP system on a tower or multi-story building unless they hold a specific certification gained through one of any number of OSHA and FCC approved certification centers and curriculums. Such a curriculum extends beyond safety to include elements such as radio wave propagation, grounding, wind loading, etc. The certifying center would issue those passing the course a registered and numbered photo ID. Each number, uniquely identifying the student and the certification center, would be registered in a public FCC database. Recertification would be required every few years. Any center found issuing a fraudulent certification would be fined or indicted and have their license revoked, and all certifications issued within the past year would be revoked.

[2] ITU-R 530-9: Propagation Data & Prediction Methods required for the design of terrestrial Line-of-Sight systems.

Revoked cardholders would be notified and given a grace period for retesting through another center (without having to retake the training course). This would give the added benefit of forcing students and cardholders to choose reputable certification centers.

2. No WiPOP system can be installed until the design has been approved and notarized by a certified RF system designer. Such a designer would also be certified through an FCC approved certification center. Designers would carry a notary-like stamp that affixes their name to the design. The RF Designer would be responsible for verifying the soundness of the WiPOP design and that the WiPOP system meets current FCC regulations. A list of certified RF Designers would be maintained in a public database. It would be required to maintain a copy of this notarized design at any operating WiPOP. If inspected and not on file, the owner would be subject to a fine, and the WiPOP would be immediately shut down. If a certified WiPOP was inspected and found to be non-compliant, the RF Designer would have his/her license revoked.

The above rules would help to improve safety and professionalism within the market, and do so in a manner that would place the burden on the private sector to encourage self-interest based policing.

Respectfully submitted,

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